



# MI PRAMS Delivery

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## Preconceptional Binge Drinking & Pregnancy Intention

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### Points of Interest

- ♦ Almost 40% of PRAMS respondents reported at least one binge drinking episode three months prior to pregnancy
- ♦ Less educated, younger, unmarried women were most likely to report binge drinking
- ♦ About 50% of women with an unintended pregnancy reported binge drinking

Binge drinking, defined as having five or more alcoholic beverages in one sitting, is a growing concern in the United States (1, 2, 3, 4). It has been linked to several adverse outcomes for both women and children, including intentional and unintentional injuries, unplanned sexual intercourse, and sexually transmitted disease (2). Binge drinking is most

prevalent among persons in their late teens/early 20's and has been increasing in prevalence in recent years (3, 4). In addition, exposure to alcohol in the prenatal period has been connected with miscarriage, mental retardation, and other preventable birth defects (2).

In the United States, approximately half of all live births are the result of an unintended pregnancy.

Unintended pregnancy is associated with several undesirable outcomes, including late entry into prenatal care, low birth weight infants, and poor childhood development (1).

Women who binge drink may increase their risk for an unintended pregnancy and unknowingly expose their fetus to high levels of alcohol.

### Prevalence of Binge Drinking

The PRAMS survey asks several questions associated with drinking behavior both prior to and during pregnancy. The following questions associated with preconceptional drinking were asked in the survey conducted between Jul 2001- Dec 2002 "During

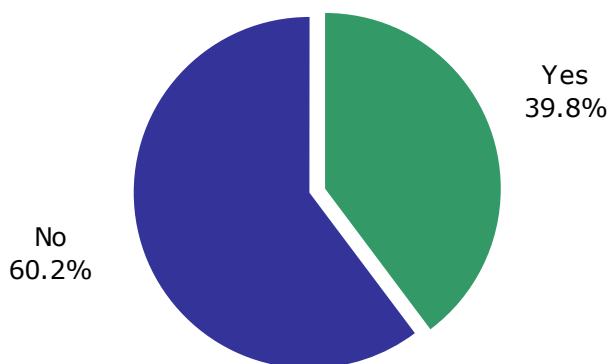
the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week?" and "During the 3 months before you got pregnant, how many times did you drink five alcoholic drinks or more in one sitting?"

Approximately 56.7% of women reported

drinking in the three months prior to pregnancy. In addition, 39.8% of women reported having one or more binge episodes in the three months preceding pregnancy (Figure 1).

Pregnancy intention was assessed from the following question:

**Prevalence of Binge Drinking  
Three Months Prior to Pregnancy**



**Figure 1:** Prevalence of Preconceptional Binge Drinking, Jul 2001- Dec 2002 MI PRAMS

## Fetal Alcohol Syndrome

Exposure to alcohol during the prenatal period may lead to fetal alcohol syndrome (FAS). FAS is the leading preventable birth defect in the US, with an estimated prevalence of about 0.5 to 2 cases per 1,000 births (5, 6). It is characterized by growth and central nervous system problems, as well as abnormal facial features.

Based on the scientific evidence, the following are known about FAS:

- ◆ No amount of alcohol consumption is considered safe
- ◆ The fetus can be damaged by alcohol at any developing stage
- ◆ Alcohol consumption during pregnancy increases the risk for FAS
- ◆ All alcohol related birth defects are preventable
- ◆ The cognitive and behavioral effects of alcohol exposure are lifelong (5)

Therefore, pregnant women should not consume alcohol. Furthermore, those contemplating pregnancy should consider abstaining from alcohol (5). An increase in access to family planning services and effective use of contraceptives would also help reduce the risk of possible prenatal alcohol exposure given that over 40% of pregnancies are unplanned.

"Thinking back to just before you got pregnant, how did you feel about becoming pregnant? (a) I wanted to be pregnant sooner (b) I wanted to be pregnant later (c) I wanted to be pregnant then (d) I didn't want to be pregnant then or at any time in the future. Women who answered

(a) or (c) were categorized as intended and those who responded with (b) or (d) as unintended. Unintended pregnancy was further subdivided into mistimed and unwanted. Women who answered (b) were characterized as mistimed and those who answered

(d) were classified as unwanted.

Among the respondents, about 42.3% reported having an unintended pregnancy. Of those women who had an unintended pregnancy approximately 74.3% had a mistimed pregnancy and 25.7% had an unwanted pregnancy.

## Maternal Demographics

Studying maternal demographics of women who binge drink helps healthcare professionals target their interventions for the most high-risk groups. When stratifying by medical insurance status prior to pregnancy, women without medical insurance had the highest rate of binge drinking (57.5%) followed by women who were on Medicaid (54.7%). Women with medical insurance prior to pregnancy were the least likely to report binge drinking (35.7%) three months preceding pregnancy.

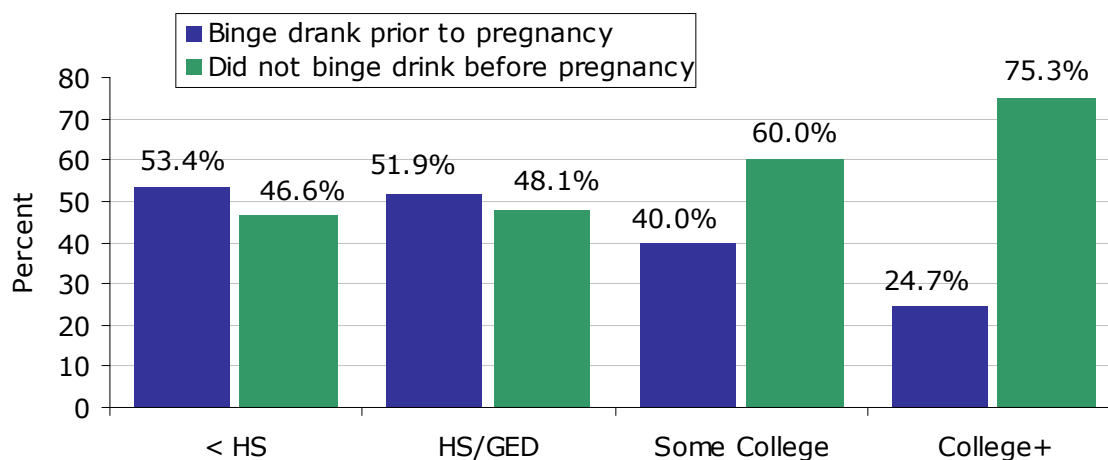
Also, more non-married women reported an episode of binge drinking three months prior to pregnancy (54.5%) when compared to women classified as married (33.6%).

When comparing educational status, binge drinking decreases as mothers' education increases. Over 50% of women with a high school degree/GED or less reported binge drinking three months prior to pregnancy while 24.7% of women with at least a college degree reported binge drinking (Figure 2).

Maternal age had an inverse relationship to binge drinking with women younger than 20 years of age most likely to report binge drinking in the 3 months preceding pregnancy (50.9%). Women older than 35 years of age were the least likely to report an episode of binge drinking (29.6%).

Among racial groups, Hispanic women were the most likely to report binge drinking (49.0%). In addition, 39.7% of Non-Hispanic White and 34.2% of Non-Hispanic Black reported binge drinking.

**Binge Drinking by Maternal Education**



**Figure 2:** Prevalence of Binge Drinking Three Months Prior to Pregnancy by Maternal Education, Jul 2001- Dec 2002 MI PRAMS

## Prenatal Care and Drinking

Prenatal care providers have an important opportunity to give women critical information about pregnancy, including the negative effects of alcohol on the developing fetus. The PRAMS survey asks whether a healthcare

professional discussed alcohol consumption and its influence on the fetus.

Approximately, 72.1% of women reported discussing the effects of alcohol exposure on a fetus, while almost 30% reported not discussing

the topic with a healthcare professional during prenatal care. Thus, more information needs to be provided to healthcare professionals to ensure that all women receive the appropriate education about alcohol consumption during prenatal care.

## Binge Drinking & Pregnancy Intention

Since over 40% of pregnancies are unintended, learning if an association exists between pregnancy intention and binge drinking is an important step toward prevention.

Among women with an unintended pregnancy, approximately 50% (95%CI: 44.7%, 55.4%) reported at least one binge drinking episode three months prior to pregnancy, compared to 33.2% (95%CI: 29.3%, 37.3%) of women with an intended pregnancy (Figure 3). A crude odds ratio of 2.0 (95%CI: 1.5, 2.7), between pregnancy intention and binge drinking illustrates that an

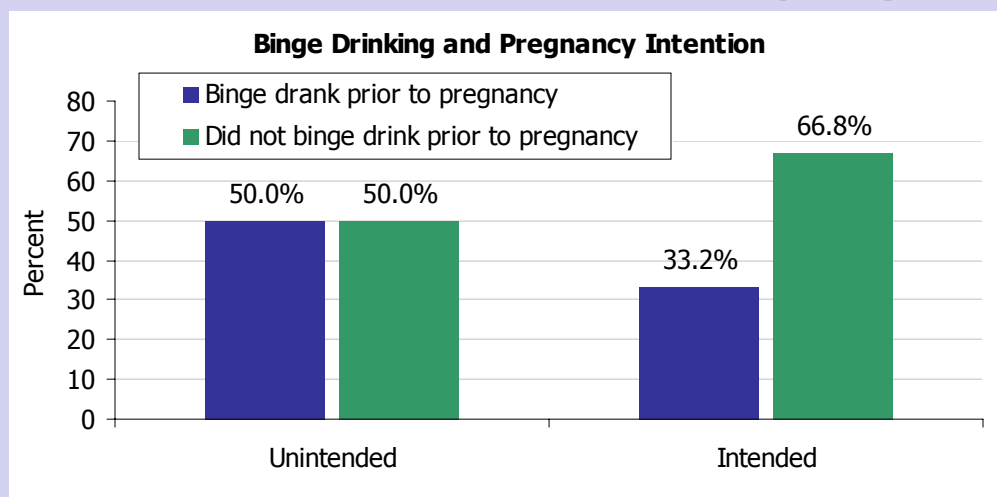
association exists.

The prevalence of binge drinking was almost the same when unintended pregnancy is stratified by type: 50.0% (95%CI: 44.6%, 57.0%) in women with a mistimed pregnancy and 47.9% (95%CI: 37.8%, 58.2%) in women with an unwanted pregnancy. When further examining each type of unintended pregnancy versus intended pregnancy, women with a mistimed pregnancy were 2.1 (95%CI: 1.5, 2.8) times more likely to binge drink and those with an unwanted pregnancy were 1.9 (95%CI: 1.2, 2.9) times more likely to binge drink.

### Recommendations

- ◆ Promote education about alcohol exposure during the prenatal period to women of childbearing age
- ◆ Educate women considering pregnancy about the risks of fetal alcohol exposure
- ◆ Assure that prenatal care providers discuss the negative effects alcohol has on a developing fetus
- ◆ Develop follow-up procedures for children exposed to alcohol during the prenatal period

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**Figure 3:** Prevalence of Binge Drinking Three Months prior to Pregnancy by Pregnancy Intention, Jul 2001- Dec 2002 MI PRAMS

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## About Michigan's PRAMS

The Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based survey, is a CDC initiative to reduce infant mortality and low birth weight. It is a combination mail/telephone survey designed to monitor selected self-reported maternal behaviors and

experiences that occur before and during pregnancy, as well as early-postpartum periods of women who delivered a live infant in Michigan. Information regarding the health of the infant is also collected for analysis. Annually, over 2,000 mothers are selected at random to participate from

a frame of eligible birth certificates. Women who delivered a low-birth weight infant were over-sampled in order to ensure adequate representation. The results are weighted to represent the entire cohort of women who delivered during that time frame.

### Fetal Alcohol Syndrome Program

The Fetal Alcohol Syndrome program provides education about FAS to women of childbearing age. The goals for Michigan's FAS program are: to increase awareness and prevention of FAS, make outreach, screening, and referrals for diagnostic services easier, and provide therapeutic and social support for families with children with FAS. To learn more about the program, please contact Cheryl Lauber at [lauberc@michigan.gov](mailto:lauberc@michigan.gov).

### Suggested Citation

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